#20/E

SEQUENCE LISTING

<110> Meulewater, Frank
Cornelissen, Marc
Van Eldik, Gerben
Jacobs, John

<120> Methods and means for delivering inhibitory RNA to plants and applications thereof

<130> FKOSAT

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<170> PatentIn Ver. 2.0

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<213> Artificial Sequence

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<223> Description of Artificial Sequence:cDNA copy of the nucleotide sequence of the genome of TNV-A

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<220>
<223> Description of Artificial Sequence: cDNA copy of the nucleotide sequence of the genome of TMV-U1

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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA copy of
the nucleotide sequence of the genome of STNV-2

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<211> 1058
<212> DNA
<213> Artificial Sequence

<220>
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<211> 6355
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA copy of the nucleotide sequence of the genome of TMV-U2

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<210> 6
<211> 2346
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequenc : nucleotide
sequence of the tomato phytoene desaturase (pds)
encoding cDNA

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gaaccactcc ctatatcttc taggtgcttt cattcgttcc gaggtaagaa aagatttttg 180
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gaattc 2346

<210> 7
<211> 7096
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleotide sequence of the tobacco nitrate reductase (nia-2) encoding cDNA

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acggatcttc ttccttcagc agctttctag cacctattaa ggaacttgtt ccagcgcaga 5700
ggagtgtggc cctaattcca agagagaaaa tcccatgcaa actcatcgac aagcaatcca 5760
tctcccatga tgttaggaaa tttcgatttg cattgccctc tgaggatcaa gtcttgggct 5820
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gaaagggaaa tttcttagtt catggcaaac agaagtttgc caagaagttg gccatgatag 6120
caggtggaac aggaataact ccagtgtatc aagtcatgca ggcaattctg aaagatccag 6180
aagatgacac agaaatgtat gtggtgtatg ctaacagaac agaggatgat attttactta 6240
aggaagagct tgattcatgg gctgagaaaa ttccagagag ggttaaagtt tggtatgtgg 6300
ttcaggattc tattaaagaa ggatggaagt acagcattgg ttttattaca gaagccattt 6360
tgagagaaca tatccctgag ccatctcaca caacactggc tttggcttgt ggaccacctc 6420
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cttccaacaa agtgattctt tagggaagaa atgtactgta ctgtactagt atgtctaagc 6720
cgaaagttgt aatgtttacc atgacaaatt gtattcaatt cctcatggaa tagtaacatt 6780
gtgttcatgt gtcttcctgt aagcgatctt caaaatatca atgtatatat atagtaattg 6840
caaaccattg ttccttttcc cgatgtagtt aactactctt tctttagctt ctagtctctg 6900
gtgaatattt ttttttctat aactctttaa ttaatacggc cttaaataag agaaaagttt 6960
aaaccacgaa tatcattatg cagacgtata ggtaattaat ctacttttttg aaaaaaaatc 7020
tattttcttt atgtggtcct tcaaaataat attctagaac cttttgtata ttccctttta 7080
acttctattt agtttt 7096

<210> 8
<211> 1839
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleotide
sequence of the tobacco nitrite reductase (nir-1)
encoding cDNA

<400> 8
tttctattaa atttctggca ccttcattgc caaatccagc tagattttcc aagaatgctg 60
tcaagctcca cgcaactccg ccgtctgtgg cagcgccgcc agctggtgct ccagaggttg 120
ctgctgagag gctagaaccc agagttgagg aaaaagatgg ttattggata ctcaaggagc 180
agtttagaaa aggcataaat cctcaagaaa aggtcaagat tgagaagcaa cctatgaagt 240
tgttcatgga aaatggtatt gaagagcttg ctaagatacc cattgaagag atagatcagt 300
ccaagcttac taaggatgat attgatgtta ggcttaagtg gcttggcctc ttccatagga 360
gaaagaacca atatgggcgg ttcatgatga gattgaagct tccaaatgga gtaacaacga 420
gtgcacagac tcgatacttg gcgagtgtga taaggaaata cgggaaagaa ggatgtgctg 480
atattacaac gaggcaaaat tggcagattc gtggagttgt actgcctgat gtgcccgaga 540
tactaaaggg actagcagaa gttgggttga ccagtttgca gagtggcatg gacaatgtca 600
ggaatccagt aggaaatcct cttgctggaa ttgatccaga agaaatagta gacacagggc 660
cttacactaa tttgctctcc caatttatca ctggcaattc acgaggcaat cccgcagttt 720
ctaacttgcc aaggaagtgg aatccgtgcg tagtaggctc tcatgatctt tatgaacatc 780
cccatatcaa cgatctcgcg tacatgcctg ccacgaaaga tggacgattt ggattcaacc 840
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gggttccagc tgatgatgtt gttccggttt gcaaagcaat actggaagct tttagagatc 960
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ctccagagga cttggttcag aaacaatggg aaagaagaga ttatcttggt gtacatccac 1140
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acgatatgga tgagctagct cgtttagctg atgagtatgg ttcaggagag atccggctta 1260
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tgataactga agaggttcaa cggcaagttt ctttgacacg gccagtgagg atgcactgga 1500
caggctgccc gaatacgtgt gcacaagttc aagttgcgga cattggattc atgggatgcc 1560
tgactagaga taagaatgga aagactgtgg aaggcgccga tgttttctta ggaggcagaa 1620
tagggagtga ttcacatttg ggagaagtat ataagaaggc tgttccttgt gatgatttgg 1680
taccacttgt tgtggactta ctagttaaca actttggtgc agttccacga gaaagagaag 1740
aaacagaaga ctaataaaat ttagaatagt tggtgatttt gctgtgttca taacatgtaa 1800
tgtatgataa atcaatgcaa acatttctac ctacgtgag 1839

<210> 9
<211> 1294
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA of the
beta-1,3-glucanase of Nicotiana plumbagenifolia

<400> 9

ttgctcttca aatggctgct attatactgc taggattgct tgtttccagc actgagatag 60
taggagctca atcagtaggt gtttgctacg gaatgctggg caacaacttg ccaccagcat 120
cacaagttgt acaactgtac aagtcaaaaa acataagaag aatgaggctt tatgatccaa 180
atcaagcagc tttacaggct ttaagaggct ccaacattga agttatgtta ggagttccca 240
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gccctgtaac aggcacatct tcacttaccc gatatcttct tccggccatg aggaacattc 420
ggaatgcgat ttcttcagca ggtttgcaaa acaatatcaa agtctcaagt tctgtagaca 480
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caatgtcgga tgctgtgtat gctgccctgt ctcgagccgg agggggctcg atagagattg 780
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aagtcattga gacctattta tttgctatgt ttgatgagaa taacaaaaac cctgaattgg 960
agaaacattt tggactcttt tcccccaaca agcagcccaa atatccactc agctttgggt 1020
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gtgagatgtg ataagagagt tctctttaaa tatctttaca tggatggaaa acttagtacc 1140
aataactaga ttgtttcttt ctttatgcaa ttttcttgta atgagagact agtacttgct 1200
ctctgtgtcc ttgtggagag taactagaga caaattaagc aaataacata aataattgag 1260
tgttgattct gcaatgataa atagaaaaaa aaaa 1294

<210> 10
<211> 720
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: green
fluorescent protein encoding regon

<400> 10
atggtgagca agggcgagga gctgttcacc ggggtggtgc ccatcctggt cgagctggac 60
ggcgacgtaa acggccacaa gttcagcgtg tccggcgagg gcgagggcga tgccacctac 120
ggcaagctga ccctgaagtt catctgcacc accggcaagc tgcccgtgcc ctggcccacc 180
ctcgtgacca ccctgaccta cggcgtgcag tgcttcagcc gctaccccga ccacatgaag 240
cagcacgact tcttcaagtc cgccatgccc gaaggctacg tccaggagcg caccatcttc 300
ttcaaggacg acggcaacta caagacccgc gccgaggtga agttcgaggg cgacaccctg 360
gtgaaccgca tcgagctgaa gggcatcgac ttcaaggagg acggcaacat cctggggcac 420
aagctggagt acaactacaa cagccacaac gtctatatca tggccgacaa gcagaagaac 480
ggcatcaagg tgaacttcaa gatccgccac aacatcgagg acggcagcgt gcagctcgcc 540
gaccactacc agcagaacac ccccatcggc gacggccccg tgctgctgcc cgacaaccac 600
tacctgagca cccagtccgc cctgagcaaa gaccccaacg agaagcgcga tcacatggtc 660
ctgctggagt tcgtgaccgc cgccgggatc actctcggca tggacgagct gtacaagtaa 720

<210> 11
<211> 1809

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial
Sequence:beta-glucuronidase encoding region

<400> 11
atggtccgtc ctgtagaaac cccaacccgt gaaatcaaaa aactcgacgg cctgtgggca 60
ttcagtctgg atcgcgaaaa ctgtggaatt gatcagcgtt ggtgggaaag cgcgttacaa 120
gaaagccggg caattgctgt gccaggcagt tttaacgatc agttcgccga tgcagatatt 180
cgtaattatg cgggcaacgt ctggtatcag cgcgaagtct ttataccgaa aggttgggca 240
ggccagcgta tcgtgctgcg tttcgatgcg gtcactcatt acggcaaagt gtgggtcaat 300
aatcaggaag tgatggagca tcagggcggc tatacgccat ttgaagccga tgtcacgccg 360
tatgttattg ccgggaaaag tgtacgtatc accgtttgtg tgaacaacga actgaactgg 420
cagactatcc cgccgggaat ggtgattacc gacgaaaacg gcaagaaaaa gcagtcttac 480
ttccatgatt tctttaacta tgccggaatc catcgcagcg taatgctcta caccacgccg 540
aacacctggg tggacgatat caccgtggtg acgcatgtcg cgcaagactg taaccacgcg 600
tctgttgact ggcaggtggt ggccaatggt gatgtcagcg ttgaactgcg tgatgcggat 660
caacaggtgg ttgcaactgg acaaggcact agcgggactt tgcaagtggt gaatccgcac 720
ctctggcaac cgggtgaagg ttatctctat gaactgtgcg tcacagccaa aagccagaca 780
gagtgtgata tctacccgct tcgcgtcggc atccggtcag tggcagtgaa gggcgaacag 840
ttcctgatta accacaaacc gttctacttt actggctttg gtcgtcatga agatgcggac 900
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gcagatgaac atggcatcgt ggtgattgat gaaactgctg ctgtcggctt taacctctct 1080
ttaggcattg gtttcgaagc gggcaacaag ccgaaagaac tgtacagcga agaggcagtc 1140
aacggggaaa ctcagcaagc gcacttacag gcgattaaag agctgatagc gcgtgacaaa 1200
aaccacccaa gcgtggtgat gtggagtatt gccaacgaac cggatacccg tccgcaagtg 1260
cacgggaata tttcgccact ggcggaagca acgcgtaaac tcgacccgac gcgtccgatc 1320
acctgcgtca atgtaatgtt ctgcgacgct cacaccgata ccatcagcga tctctttgat 1380
gtgctgtgcc tgaaccgtta ttacggatgg tatgtccaaa gcggcgattt ggaaacggca 1440
gagaaggtac tggaaaaaga acttctggcc tggcaggaga aactgcatca gccgattatc 1500
atcaccgaat acggcgtgga tacgttagcc gggctgcact caatgtacac cgacatgtgg 1560
agtgaagagt atcagtgtgc atggctggat atgtatcacc gcgtctttga tcgcgtcagc 1620
gccgtcgtcg gtgaacaggt atggaatttc gccgattttg cgacctcgca aggcatattg 1680
cgcgttggcg gtaacaagaa agggatcttc actcgcgacc gcaaaccgaa gtcggcggct 1740
tttctgctgc aaaaacgctg gactggcatg aacttcggtg aaaaaccgca gcagggaggc 1800
aaacaatga 1809

<210> 12
<211> 411
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA copy of
part of the region of a TMV-U2 variant comprising

the origin of assembly

<400> 12
ccctcgccaa ttgaactcac tgaaaaagtt gttgatgagt tcgtagatga agtaccgatg 60
gctgtgaaac tcgaaaggtt ccggaaaaca aaaaagagag tggtaggtaa taatgttaat 120
aataagaaaa taaataatag tggtaagaag ggtttgaaag ttgaggaaat tgaggataat 180
gtaagtgatg acgagtctat cgcgtcatcg agtacgtttt aatcaatatg ccttatacaa 240
tcaactctcc gagccaattt gtttacttaa gttccgctta tgcagatcct gtgcagctga 300
tcaatctgtg tacaaatgca ttaggtaacc agtttcaaac gcaacaagct aggacaacag 360
tccaacagca atttgcggat gcctggaaac ctgtgcctag tatgacagtg a 411

<210> 13
<211> 198
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA copy of
STMV leader region

<400> 13
agtaaaactt accaatcaaa agacctaacc aacaggactg tcgtggtcat ttatgctgtt 60
gggggacata gggggaaaac atattgcctt cttctacaag aggccttcag tcgccataat 120
tacttggcgc ccaattttgg gtttcagttg ctgtttccag ctatggggag aggtaaggtt 180
aaaccaaacc gtaaatcg 198

<210> 14
<211> 455
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:cDNA copy of
STMV trailer region

<400> 14
gacaagtcgc cttggttatt tcgtgttgtt ttaactgaac ctcgacataa gccttttgga 60
tcgaaggtta aacgatccgc tcctcgcttg agcttgaggc ggcgtatctc ttatgtcaac 120
agagacactt tggtctatgg ttgtataaca atagatagac tcccgtttgc aagattaggg 180
ttaacagatc ttgccgttag tctggttagc gcgtaaccgg ccttgattta tggaatagat 240
ccattgtcca atggctttgc caatggaacg ccgacgtggc tgtataatac gtcgttgaca 300
agtacgaaat cttgttagtg tttttccctc cacttaaatc gaagggtttt gttttggtct 360
tcccgaacgc atacgttagt gtgactaccg ttgttcgaaa caagtaaaac aggaaggggg 420
ttcgaatccc tccctaaccg cgggtaagcg gccca 455

<210> 15
<211> 1971
<212> DNA

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: cDNA copy of part of the genome of a TMV-U1 variant, comprising MP and CP genes

<400> 15
ggaaacactg tgattatagc tgcatgtttg gcctcgatgc ttccgatgga gaaaataatc 60
aaaggagcct tttgtggtga cgatagtctg ctgtacttcc caaagggttg tgagtttccg 120
gatgtgcaac actccgcgaa tcttatgtgg aattttgaag caaaactgtt taaaaaacag 180
tatggatact tttgcggaag gtatgtaata catcacgaca gaggatgcat tgtgtattac 240
gatcccctaa agttgatctc gaaacttggt gctaaacaca tcaaggattg ggaacacttg 300
gaggagttca gaaggtctct ttgtgatgtt gctgtttcgt tgaacaattg tgcgtattac 360
acacagttgg acgacgctgt atgggaggtt cataagaccg cccctccagg ttcgtttgtt 420
tataaaagtc tggtgaagta tttgtctgat aaagttcttt ttagaagttt gtttatagat 480
ggctctagtt gttaaaggaa aagtgaatat caatgagttt atcgacctga caaaaatgga 540
gaagatctta ccgtcgatgt ttacccctgt aaagagtgtc atgtgttcca aagttgataa 600
aataatggtt catgagaatg agtcattgtc agaggtaaac cttctcaaag gagttaagct 660
tattgatagt ggatacgtct gtttagccgg tttggtcgtc acgggcgagt ggaacttgcc 720
tgacaattgc agaggaggtg tgagcgtgtg tctggtggac aaaaggatgg aaagagccga 780
cgaggccact ctcggatctt actacacagc agctgcaaag aaaagatttc agttcaaggt 840
cgttcccaat tatgctataa ccacccagga cgcgatgaaa aacgtctggc aagttttagt 900
caatattaga aatgtaaaga tgtcagcggg tttctgtccg ctttctctgg agtttgtgtc 960
ggtgtgtatc gtttatagaa ataatataaa attaggtttg agagagaaga tcacaagtgt 1020
gagagatgga gggcccatgg aacttacaga agaagttgtt gatgagttca tggaagatgt 1080
ccctatgtca atcaggcttg caaagtttcg atctcgaacc ggaaaaaaga gtgatgtccg 1140
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aatagaataa tagaagttga aaatcaggcg aaccccacaa ctgccgaaac gttagatgct 1620
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gaattgatca gaggaaccgg atcttataat cggagctctt tcgagagctc ttctggtttg 1740
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gtccgtaatc acacgtggtg cgtacgataa cgcatagtgt ttttccctcc acttaaatcg 1860
aagggttgtg tcttggatcg cgcgggtcaa atgtatatgg ttcatataca tccgcaggca 1920
cgtaataaag cgaggggttc gaatcccccc gttacccccg gtaggggccc a 1971